A COMPARISON OF TWO CONTEMPORARY CREEP-FATIGUE LIFE PREDICTION METHODS

by

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A comparison of two contemporary approaches to creep-fatigue life prediction, the Continuous Damage Mechanics as developed at ONERA, and Strain Range Partitioning, is presented. The general framework of each of these approaches, both being crack-initiation life prediction tools, are examined. The basis for, and implications of each predictive method are discussed, relative to the material class(es) for which each was developed, as well as to their general applicability. Evident is a need for critical experiments capable of discriminating among the models; to this end, the question of choice of experiment and material is addressed.

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